

# Work Order ID 60828

Friday, July 23, 2010 1:29:01 PM

Page 1

Item ID: D412-711-101

Accept

Setup

Start

Revision ID:

Stop

Item Name: Replacement Bubble Window

Start Date: 7/23/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 7/30/2010 Req'd Qty: 1.00

Customer:

Reference:


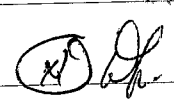

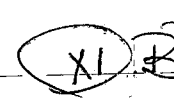

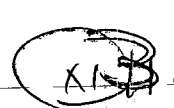
Run

Start

Approvals: Process Plan:                      Date: 10-7-23 Tooling:                      Date:                     

Stop

QC:                      Date:                      SPC (Y/N):                      Date:                     

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D412-711-101	A								
100		0.00							
	HAND FINISHING THERMOFORMING								 10/02/03
Thermoform	Memo	0.00							
Thermoforming Machine	Set up Machine as per folio FTA 077 and D711W program								
110		0.00							
	HAND FINISHING THERMOFORMING								 10/08/03
Thermoform	Memo	0.00							
Thermoforming Machine	Cut Blanks to 36" by 39"								
120		0.00							
	THERMOFORMING MACHINE								 10/08/03
Thermoform	Memo	0.00							
Thermoforming Machine	Thermoform as per Dwg. D412-711-101 using DT 9640 and Folio FTA 077								
	Dwg. Rev. <u>                    </u>								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Run

Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo 1) Check Surface finish for undesired marks, voids, dimples etc. 2) Check depth of bubble to ensure conformity to drawing tolerances.	0.00  0.00							10/08/03
140  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00							10/08/03
150  Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING  Memo 1) Trim off excess flange material 2) Buff out any light scratches or blemishes 3) Etch part number and batch number	0.00  0.00							10/08/04

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 3

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Revision ID:

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Start Date: 7/23/2010 Start Qty: 1.00

Required Date: 7/30/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

KTB 7/28/04

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/6/05

KTB

1) Visually inspect for clarity, and proper formation.

180

Identify as per dwg & Stock Location: 80

0.00



Packaging

Memo

0.00

Packaging

Pec C

CHG 002

10/8/05

W/O:		WORK ORDER CHANGES					
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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Page 4

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Start Date: 7/23/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Run

Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/05 *[Signature]*  
NF  
10-8-05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Friday, July 23, 2010 1:29:05 PM

Page 1

Work Order ID: 60828

Parent Item: D412-711-101

Parent Item Name: Replacement Bubble Window

Start Date: 7/23/2010



Required Date: 7/30/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-02-01 JLM  
Manufacture in-house 10/06/28 DL

IPP Rev. B.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236 		Purchased	No				sf	145.0000	16	16			
Plexiglass G .236"													

Location

therm

Loc Qty

145

65

80

Loc Code

113571

115096

(X) BB

10/08/03

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 60828
<b>Description:</b> Replacement Bulbale Window.	<b>Part Number:</b> D412-711-101
<b>Inspection Dwg:</b> D412-711-101 Rev: A.	<b>Page 1 of 1</b>

**FIRST ARTICLE INSPECTION CHECKLIST**  
**THERMOFORMING SECTION**

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: BB

Date: 10/08/04

**TRIMMING SECTION**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
32.0		32.125	✓			
31.0		31.	✓			
15.0	±.05	14.875	✓			
.090	Min	.120	✓			
.070	Min	.108	✓			
.050	Min	.060	✓			

Measured by: BB

Date: 10/08/04

Audited by: S

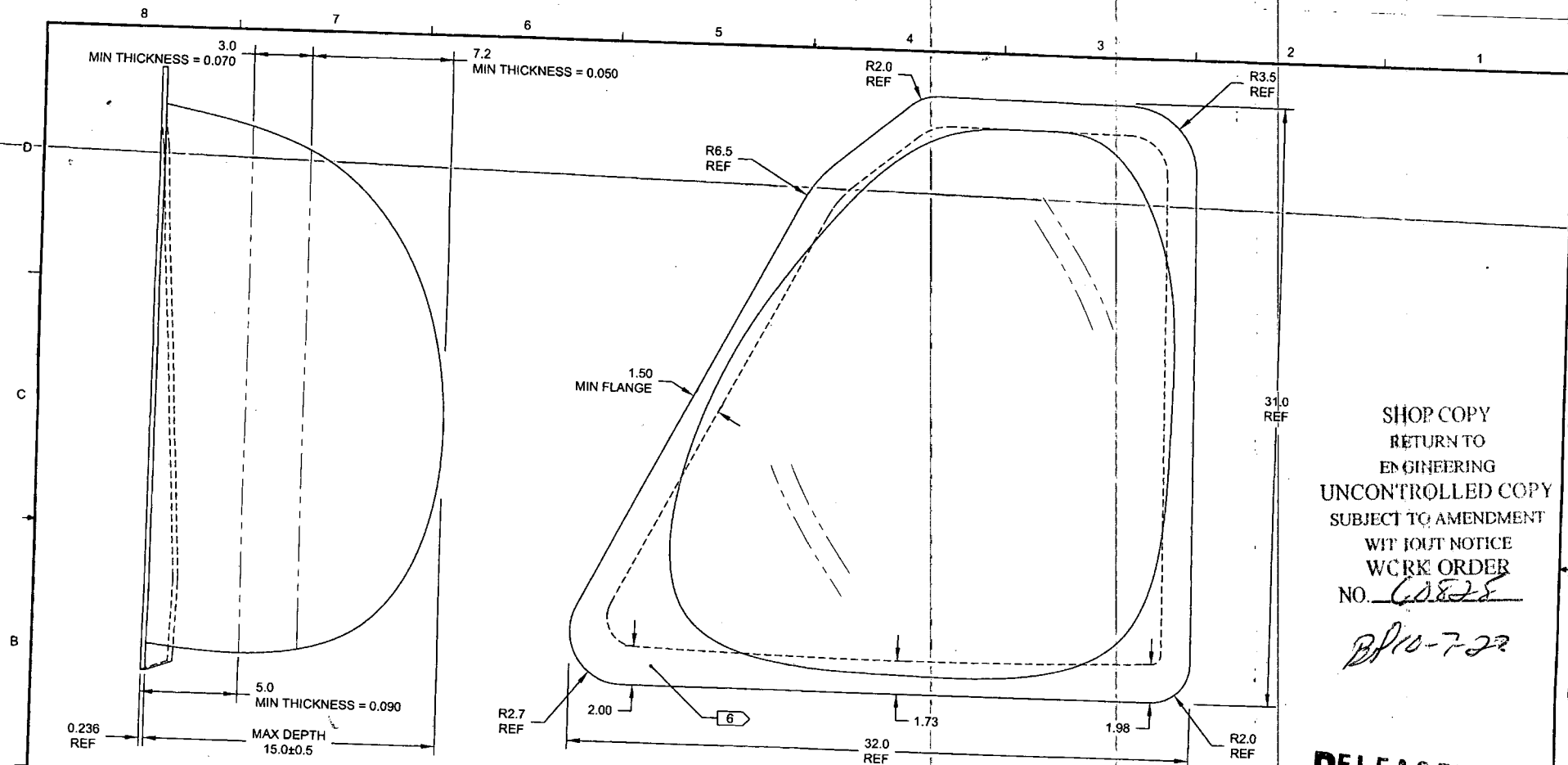
Date: 12/08/05

Preliminary Approval:

Date:

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

*10-04-14*



### D412-711-101 REPLACEMENT WINDOW

#### NOTES:

- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C  
OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425,  
0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE  
OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
- 7) WEIGHT: 8.0 lbs
- 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 60828

*BPI0-722*

RELEASED  
2010-06-30  
*mp*

A NEW ISSUE		MB 10.06.28	
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.06.28		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D412-711-101	REV. A
TITLE REPLACEMENT WINDOW	SCALE NTS

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NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

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